

AIR FORCE QUALIFICATION TRAINING PACKAGE (AFQTP)



for
LIQUID FUEL SYSTEMS MAINTENANCE
(3E4X2)

MODULE 19

AFS SPECIFIC CONTINGENCY RESPONSIBILITIES

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Career Field Education and Training Plan (CFETP) references from 1 Apr 97 version.

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Notice. This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

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INTRODUCTION

Before starting this AFQTP, refer to and read the “Trainee/Trainer Guide” located on the AFCESA Web site <http://www.afcesa.af.mil/>

AFQTPs are mandatory and must be completed to fulfill task knowledge requirements on core and diamond tasks for upgrade training. *It is important for the trainer and trainee to understand* that an AFQTP ***does not*** replace hands-on training, nor will completion of an AFQTP meet the requirement for core task certification. AFQTPs will be used in conjunction with applicable technical references and hands-on training.

AFQTPs and Certification and Testing (CerTest) must be used as minimum upgrade requirements for Diamond tasks.

MANDATORY minimum upgrade requirements:

Core task:

AFQTP completion
Hands-on certification

Diamond task:

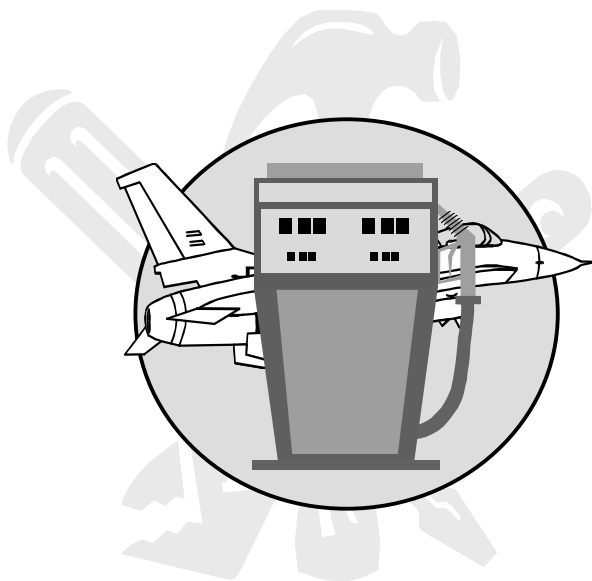
AFQTP completion
CerTest completion (80% minimum to pass)

Note: *Trainees will receive hands-on certification training for Diamond Tasks when equipment becomes available either at home station or at a TDY location.*

Put this package to use. Subject matter experts under the direction and guidance of HQ AFCESA/CEOT revised this AFQTP. If you have any recommendations for improving this document, please contact the Career Field Manager at the address below.

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POL DISTRIBUTION SYSTEM REPAIR

MODULE 19

AFQTP UNIT 1

POL RAPID UTILITY REPAIR KIT (19.1.4.2.)

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POL RAPID UTILITY REPAIR KIT***Task Training Guide***

STS Reference Number/Title:	19.1.4.2., POL Rapid Utility Repair Kit
Training References:	<ul style="list-style-type: none">• CD-ROM, RURK, POL Rapid Utility Repair Kit, 3E4X2C-19.1.4
Prerequisites:	<ul style="list-style-type: none">• Possess as a minimum a 3E432 AFSC.
Equipment/Tools Required:	<ul style="list-style-type: none">•
Learning Objective:	<ul style="list-style-type: none">• Trainee should know basic operation of the POL RURK.• Trainee should know the main components of the POL RURK.• Trainee should know set-up and operation.
Samples of Behavior:	<ul style="list-style-type: none">• Trainee will perform basic operation of the POL RURK.• Trainee will name the main components of the POL RURK.• Trainee will demonstrate the set-up and operation.

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POL RAPID UTILITY REPAIR KIT

Background: A RURK configuration consists of an open-bed trailer with an equipment rack containing various equipment, three collapsible fabric tanks, an air compressor, four consolidation containers, and seven supplemental containers. The four consolidation containers provide the capability to perform one in-crater repair, three bypass repairs, and one 4-way valve pit repair for 4-, 6-, or 8-inch pipe. Supplemental containers provide components to support repairs for 10- and 12-inch pipe, puncture repair for 4- through 12-inch pipe, and additional repairs for 4-, 6-, and 8-inch pipe.

Five types of repair are possible;

- In-crater.
- Bypass.
- Valve pit.
- End cap.
- Puncture.

In-crater repairs are accomplished by entering the crater, sawing off damaged pipe ends, and attaching various hoses and pipes to establish flow and pressure. Bypass repairs serve the same purpose, but are accomplished by exposing undamaged pipe on each side of, but away from, the crater edge. Valve pit repairs can be either in-crater or bypass except valves are included so fuel flow can be controlled and/or directed. A pipe end cap repair is used to block a pipe. A puncture repair uses a repair clamp to cover a hole in a pipeline small enough not to require removing a section of pipe.

The POL RURK is delivered to user organizations as an open-bed trailer preloaded with four component containers along with seven supplemental containers, a compressor, and three fabric tanks (fig. 5–1).

Store the RURK indoors as a war reserve material (WRM) asset. The following is a list of the majority of parts and equipment in the POL RURK

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POL RURK Container 1

Illustrated Parts Breakdown for Container 1			
<i>Number</i>	<i>Description</i>	<i>Number</i>	<i>Description</i>
1	CONTAINER	14	COATING REMOVAL TOOL
2	EXTRACTOR ASSY, Fuel	15	ESSENTIAL TOOL SET
3	HOSE ASSY, Air	16	MANIFOLD ASSY, Air Hose
4	METER, Auto Gas Alarm	17	DRILLING MACHINE ASSY
5	SAW, Power, Hack, Portable	18	ADAPTER, Tank, Fabric
6	DRAWKNIFE, Carpenter's	19	CRITICAL SPARES KIT
7	TRACER, Utility Line	20	POWER HEAD ASSY
8	WRENCH, Pipe	21	DE-ICER ASSY, Air Line
9	SERVICE SADDLE, 4"	22	CORPORATION STOP ASSY
10	SERVICE SADDLE, 6"	23	HOSE ASSY, De-icer
11	SERVICE SADDLE, 8"	24	TECHNICAL ORDER
12	SERVICE SADDLE, 10"	25	QUICK REFERENCE LIST
13	SERVICE SADDLE, 12"	26	BOX, Schafer, Medium
		27	BOX, Schafer, Large

POL RURK Container 2

Illustrated Parts Breakdown for Container 2 (Figure 5-3)			
<i>Number</i>	<i>Description</i>	<i>Number</i>	<i>Description</i>
1	CONTAINER	8	POWER CABLE
2	FLOODLIGHT ASSY	9	DUCT ASSY
3	HOSE ASSY	10	COUPLER
4	FLOODLIGHT, Mast	11	PUMP ASSY
5	HOSE ASSY	12	FAN ASSY
6	GROUND FAULT INT	13	STRAINER ASSY
7	GENERATOR SET	14	CADDY, Extension Cord

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POL RURK Container 3

Illustrated Parts Breakdown for Container 3 (Figure 5–4 and 5–5)			
<i>Number</i>	<i>Description</i>	<i>Number</i>	<i>Description</i>
1	CONTAINER	13	BASE, Pipe Stand
2	SHOVEL, Hand	14	CAP, Grooved, 6" Pipe
3	BAR, Digging	15	VALVE, Butterfly
4	PICK	16	SPACER, Valve
5	HAMMER	17	CROSS, Grooved, 6" Pipe
6	PAIL	18	CLAMP, Puncture Repair, 4"
7	GREASE GUN	19	CLAMP, Puncture Repair, 6"
8	CUTTER, Pipe, 4–6"	20	CLAMP, Puncture Repair, 8"
9	CUTTER, Pipe, 8–12"	21	SAW ASSY, Bow
10	WINCH	22	STRAP, Tow
11	COUPLING ASSY	23	BOX, Schafer, Medium
12	STAND, Pipe, V-head	24	BOX, Schafer, Large

POL RURK Container 4

Illustrated Parts Breakdown for Container 4 (Figure 5–6)			
<i>Number</i>	<i>Description</i>	<i>Number</i>	<i>Description</i>
1	CONTAINER	7	PACKAGE D–8
2	BLADE, Hacksaw	8	ARRESTOR ASSY, Flame
3	HOSE, Lay Flat	9	CABLE ASSY, Grounding
4	ELBOW, Grooved, 6" Pipe	10	BOX, Schafer, Medium
5	PACKAGE D–4	11	BOX, Schafer, Large
6	PACKAGE D–6		

POL RURK Supplemental Container

Illustrated Parts Breakdown for Supplemental Container (Figs. 5–7 through 5–10)			
<i>Number</i>	<i>Description</i>	<i>Number</i>	<i>Description</i>
1	CONTAINER	14	ELBOW, 90°, Grooved, 6"
2	LATCH ASSY	15	ARRESTOR ASSY, Flame
3	RING, LIFT	16	BLADE, Hacksaw
4	INDICATOR, Humidity	17	CABLE ASSY, Grounding
5	PORT, Desiccant	18	BOX, Schafer, Small
6	VALVE, Breather	19	BOX, Schafer, Large
7	HOSE ASSY, Hardwall	20	SPACER, Valve
8	ROD, Grounding	21	CROSS, Grooved, 6"
9	PIPE SECTION, Aluminum	22	VALVE, Butterfly
10	COUPLING ASSY	23	BOX, Schafer, Medium
11	CAP, Protective, 6" Pipe	24	BOX, Schafer, Large
12	BOX, Schafer, Large	25	CLAMP, Puncture Repair 10"
13	HOSE ASSY, Lay Flat	26	CLAMP, Puncture Repair 12"

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Illustrated Parts Breakdown for Essential Tool Set (Figure 5–16)			
<i>Number</i>	<i>Description</i>	<i>Number</i>	<i>Description</i>
1	CASE , Protective, Tool	12	WRENCH, Torque, 1/2” Drive, 50–150#
2	SOCKET, Deep-well 1 1/16”	13	WRENCH, Torque, 3/8” Drive, 15–75#
3	SOCKET, Hex-bit, 17 mm	14	FILE, Mil, 12”
4	SOCKET, Hex-bit, 8 mm	15	HAMMER, 32oz
5	HANDLE, Socket, 1/2” Drive	16	TAPE, Measuring
6	HANDLE, Socket, 3/8” Drive	17	BRUSH, Wire
7	HANDLE, File	18	FLASHLIGHT, Explosion-Proof
8	SCREWDRIVER, Flat, 3”	19	WRENCH, Socket 5/16”
9	WRENCH, Pliers, Locking	20	WRENCH, Adjustable
10	RASP, Half-Round, 18”	21	WRENCH, Socket, 3/8” Drive, 3/4” 12 Point
11	KNIFE, Craftsman’s		

To Perform These Tasks, Complete: CD-ROM, RURK, POL Rapid Utility Repair Kit, 3E4X2C-19.1.4.

NOTE: In the CD-ROM there are tests after each section. Complete each section and answer the questions.

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POL RAPID UTILITY REPAIR KIT

Performance Checklist		
Step	Yes	No
1. Did trainee show the ability to set up and operate the POL RURK?		
2. Can the trainee name the major components of the POL RURK?		
3. Is the trainee able to perform a repair using the POL RURK?		

FEEDBACK: Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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